

REMARKS

The Examiner has rejected claims 1, 2 and 9 under 35 USC §103 (a) as being unpatentable over Hendren US Patent Publication 2003/0136177.

Applicants have amended claim 1 to more positively set forth, that which is regarded as the invention. Specifically, claim 1 has been amended by including that the variable mass flow stream is not only connected with the constant mass flow stream but that the variable mass flow stream is “summed with” the constant mass flow stream. This is not taught or suggested in the Hendren reference. The Hendren reference teaches that dilution air is provided by a supply pump 29 and is variably controlled by a proportional solenoid valve 28. Thus, what Hendren teaches is that there is one stream of dilution air and that the quantity of dilution air is controlled, by the proportional solenoid valve 28, so as to be in an inverse proportion relative to the ratio of engine intake air flow and the engine intake air flow at idle. Hendren therefore does not divide the dilution air into a constant mass flow stream and a variable mass flow stream that are summed together. Hendren only teaches the supply of dilution air, in a single stream, is variably controlled by way of the proportional solenoid valve 28. Furthermore, Hendren teaches that the dilution air is controlled in an inverse proportion to the ratio of engine air inlet flow rate and the engine inlet air flow rate at idle. This is contrary to the teaching of the present application specifically, the present system teaches that the exhaust gas sample is maintained proportional relative to the engine intake air flow. This is an error in the disclosure of the Hendren application. Applicants remind the Examiner that MPEP § 2143 Mandates the three criteria that must be met to provide a prima facie case for obviousness:

“...three basic criteria must be met. First, there must be some motivation, either in the references themselves or in knowledge generally available to one of ordinary skill in the art, to modify the references or to combine the reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all of the claimed limitations.”

Specifically, as now claimed in independent claim 1 the transient dilution air control arrangement controls dilution airflow by way of a variable mass flow stream that is connected

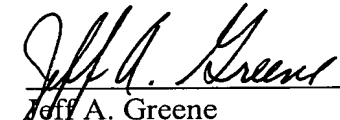
and “summed with” a constant mass flow stream. This is clearly contrary to the teachings of the Hendren reference that teaches a flow of dilution air is controlled by a proportional solenoid valve. Therefore there is no motivation for controlling the dilution air flow by combining a constant flow stream and a variable flow stream as is presently claimed in independent claim 1. Furthermore, the teachings of the Hendren reference are different from the teachings of the present invention by stating the dilution airflow is controlled in an inverse proportion to the ratio of intake air flow and the engine intake air flow at idle and therefore cannot provide a reasonable expectation of success. Lastly, the Hendren reference does not teach or suggest the features of claim 1. Applicants therefore contend that claims 2 and 9 add additional features to claim 1, which is believed to be in condition for allowance. Therefore claims 2 and 9 are believed to be allowable for at least the same reasons. Applicants therefore respectfully requests reconsideration and withdrawal of the rejection under 35 USC §103 (a) of claims 1, 2 and 9.

The Examiner has rejected claims 10 - 13 under 35 USC §103 (a) as being unpatentable over Hendren US Patent Publication 2003/0136177 in view of Kono US Patent 4,067,300.

Regarding claims 10 - 13, these claims add additional features to independent claim 1 from which they depend. Since claim 1 is now believed to be in condition for allowance, claims 10 – 13 are believed to be in condition for allowance for at least the same reasons as set forth above. Applicants therefore respectfully requests reconsideration and withdrawal of the rejection under 35 USC §103 (a) of claims 10 - 13.

It is respectfully urged that the subject application is in condition for allowance and allowance of the application at issue is respectfully requested.

Respectfully submitted,



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